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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/549,353	09/14/2005	Hyeon-Yong Jang	YOM-0188	6728

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EXAMINER
ALEMU, EPHREM

ART UNIT	PAPER NUMBER
2821	

MAIL DATE	DELIVERY MODE
01/04/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/549,353	JANG, HYEON-YONG	
	Examiner	Art Unit	
	Ephrem Alemu	2821	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *31 October 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-3 and 5-10* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-3 and 5-10* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *10/31/2007*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after allowance or after an Office action under *Ex Parte Quayle*, 25 USPQ 74, 453 O.G. 213 (Comm'r Pat. 1935). Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, prosecution in this application has been reopened pursuant to 37 CFR 1.114. Applicant's submission filed on 10/31/2007 has been entered.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 6, 9 and 10 are rejected under 35 U.S.C. 102(b) as being anticipated by Waki et al. (US 5,233,273).

Re claims 1 and 6, Waki discloses an apparatus for driving a light source (15) for a display device, the apparatus comprising:

an inverter (20) for applying a voltage to the light source (15) to be turned on or off (Figs. 2-9, 11, 13, 17; Col. 3, lines 31-34);

a temperature sensor (17) for sensing a temperature and generating a first signal (i.e., temperature feedback signal) based on the sensed temperature (Fig. 17; Col. 18, line 49- Col. 19, line 19);

an inverter controller (i.e., lighting controller 71 and oscillator 21) which generates a control signal for controlling the inverter (20) depending on the first signal (i.e., temperature feedback signal) of the temperature sensor (17) (Fig. 17; Col. 18, line 49- Col. 19, line 19); and

a buffer (i.e., included within the temperature sensor 17 to decide the lamp state) for generating a second signal (i.e., signal inputted to the lighting controller 71) based on the first signal from the temperature sensor (17) and providing the second signal for the inverter controller (i.e., lighting controller 20) (Fig. 17; Col. 18, line 49- Col. 19, line 19; wherein the inverter controller (i.e., lighting controller 71 and oscillator 21) comprises an oscillator (21) generating an oscillating signal having a frequency varying depending on the second signal from the buffer (i.e., included within the temperature sensor 17 to detect the lamp state))

wherein the voltage applied to the light source is increased or decreased based on the control signal (Fig. 17; Col. 18, line 49- Col. 19, line 19.

Re claim 9, Waki discloses an apparatus for performing a method of driving a light source (15) for a display device, comprising:

a lamp temperature sensor (17) for sensing a temperature and generating a first signal (i.e., temperature feedback signal) based on the sensed temperature and generating a second signal on the basis of the first signal (Fig. 2-9, 11, 13, 17; Col. 5, line 43- Col. 6, line 51; Col. 18, line 49- Col. 19, line 19);

a controller (i.e., lighting controller 71 and oscillator 21) for generating a third signal having a frequency depending on the states of the second signal (i.e., cool state or hot state) (Fig. 1; Col. 2, lines 37-40; Col. 5, lines 20-49); and

an inverter (20) for applying a voltage to the light source (15); and changing the voltage applied to the light source responsive to the frequency of the third signal (Figs. 2-9, 11, 13, 17; Col. 3, lines 31-34; Col. 18, line 49- Col. 19, line 19).

Re claim 10, Waki further shows the states of the second signal which is also generated by the a lamp temperature sensor (17) includes a first state and a second state, and the first state is "0" level (i.e., cold state) (i.e., when the lamp temperature is below the predetermined threshold (Figs. 2-9, 11, 13, 17; Col. 1, lines 58-61; Col. 4, lines 52-62).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 2, 3, 5, 7 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Waki et al. (US 5,233,273) in view of Tsuchiya et al. (US 6,166,491), previously submitted by applicant.

Re claims 2-3, Waki does not show the temperature sensor comprises a thermistor having a resistance varying depending on the sensed temperature and a resistor connected to the thermistor and the resistor functions as a voltage divider along with the thermistor.

In the same field of endeavor, Tsuchiya discloses a temperature sensor (i.e., thermal protection circuit 51) comprises a thermistor (i.e., temperature variable resistor 63) having a resistance varying depending on the sensed temperature and a resistor connected to the thermistor (i.e., temperature variable resistor 63) and the resistor (61, 65) functions as a voltage

divider along with the thermistor (i.e., temperature variable resistor 63) for the purpose of detecting the temperature around the discharge lamp (Fig. 4; Col. 1, lines 58-61; Col. 4, lines 52-62).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the temperature detector of Waki by providing thermistor and resistor as taught by Tsuchiya for no other reason than detecting the temperature around the discharge lamp.

Re claim 5, although, Waki does not mention the buffer (i.e., included within the temperature sensor 17 to detect the lamp state) having a hysteresis characteristic, Waki teaches the detector (17) detects the lamp temperature of the lamp or the temperature around the lamp and decide if the discharge lamp is in the in the first or second states (i.e., cool state or hot state) (Fig. 4; Col. 5, line 43- Col. 6, line 51). Therefore, Waki's detector (17) having a hysteresis characteristic would have been obvious for no other reason than deciding whether the discharge lamp being in the first or second states (i.e., cool state or hot state.)

Re claims 7 and 8, Waki further teaches the buffer (i.e., included within the temperature sensor 17 to decide the lamp state) includes a first state and a second state in the first or second states (i.e., cool state or hot state) and the frequency of the oscillating signal generated by the oscillator increases when the second signal generated by the buffer is in the first state (i.e., cold state) (Fig. 4; Col. 5, line 43- Col. 6, line 51).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ephrem Alemu whose telephone number is (571) 272-1818. The examiner can normally be reached on M-F 9:00 AM to 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Douglas W Owens can be reached on (571) 272-1662. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

EA
12-26-07

THUY V. TRAN
PRIMARY EXAMINER